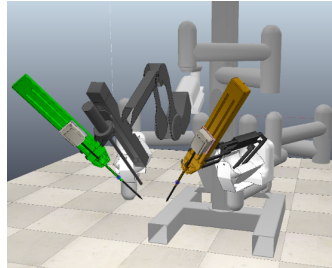
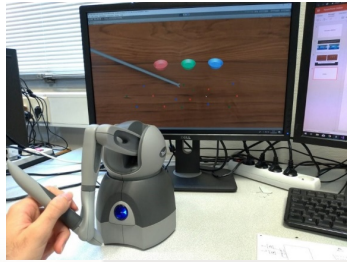


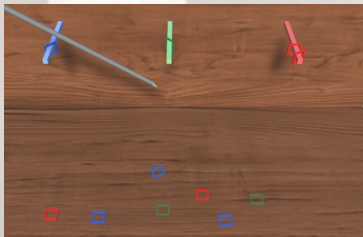


# RobotX: Robot for Intelligent Collaborative Surgery

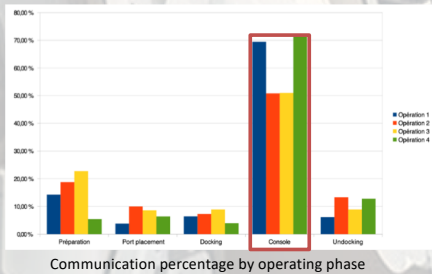
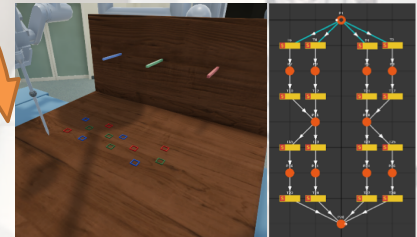
MediCIS LTSI, Inserm/UR1 Hybrid, Rainbow IRISA/Inria LP3C, UR2  
 LS2N, University Nantes/CNRS/IMT  
 CHU Rennes and Nantes  
 ICO Nantes



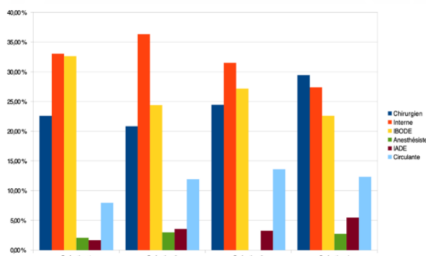
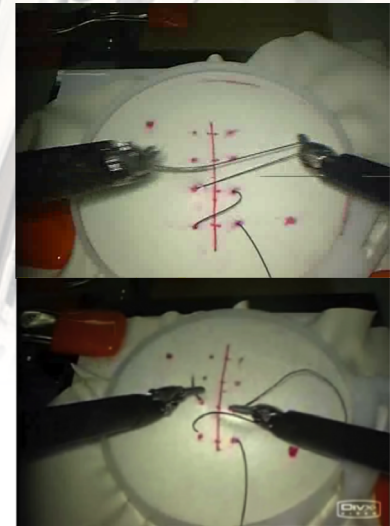
Base model



Use haptic interface Touch to manipulate the robot in the simulation software	Export the model to a 3D engine to use authoring tools for defining VR scenarios
MediCIS/IRISA-Inria Rainbow	IRISA Inria hybrid/Rainbow



Analysis of non technical skills in robotic surgery: communications in the OR on 4 surgeries	Automatic recognition of activities from kinematic data: tests on Jigsaws simulated data
Univ. Rennes 2/MediCIS/CHU Rennes, Nantes, ICO	MediCIS/IMT LS2N CNRS



	Needle Passing	Knot Tying	Suturing	All Tasks
Training Accuracy	97.24%	98.27%	97.14%	91.37%
Training Loss	0.0892	0.0621	0.1099	0.2919
Validation Accuracy	96.57%	97.56%	95.89%	91.61%
Validation Loss	0.2183	0.1490	0.2386	0.3999

Tableau 1: Results of recognition of gestures from kinematic data